Hadron Collider Commissioning Workshop

Fulvia Pilat

LARP Collaboration Meeting
Danfords, September 16-18, 2003

commissioning workshop

INTRODUCTION

- The proposal: a hadron collider commissioning workshop to held ~ late summer 2004 (Bruning, Pilat)
- Motivation, goals, topics
- Participation
- Organization

DISCUSSION

- Suggestions, input on topics, etc.
- Role of LARP

goal

Collect the commissioning experience of existing hadron collider (HERA, RHIC, Tevatron) to optimize planning for the commissioning of the next generation of large accelerators

(**first and foremost: LHC**, with special sessions and/or talks on **SNS**, **Linear Colliders**, etc. to exploit synergies)

- Last chance to collect **HERA** experience filtered for our needs and to propose MD's before HERA is switched off
- Good time to collect **RHIC** commissioning experience before institutional memory faints, and to propose beam experiments in RHIC before LHC start-up
- Collect and document studies from the **Tevatron** re-commissioning on topics very relevant to LHC commissioning, proposal of machine studies

Topics - 1

- **Strategy** and **main obstacles** for commissioning in HERA RHIC and Tevatron: what was planned, what worked as planned and what did not. How did the commissioning experience differ from the plans?
- What **magnet/alignment measurement** proved most critical in the commissioning of the machine. If magnet measurement needs to be limited, how do we pick the essential ones ?
- What subset of **instrumentation** needs to available day one? What minimum level of performance are necessary?
- Can we assess in advance prediction on machine **performance and reliability during the first 2 years of commissioning**? Can we model or predict performance and uptime based on experience and data of our systems?
- What **MD and beam experiments** can be planned at existing machines to help commissioning planning?
- How can we deal with **unplanned events**, crises (that always happen). Can we list possibilities and plan remedial actions?

Topics - 2

- What is the **optimal "sociological model"** in commissioning? (operators, system specialists, physicists…)
- How can **members of other institutions** be effective and useful during commissioning?
- Can **remote operations and access** be effectively integrated in the commissioning effort?

Participation

- CERN, HERA, TeV, RHIC personnel
- Representation SNS commissioning in ~2005
- Linear Colliders (positive experience at the HALO'03 workshop)
- Selected invited speakers from other recently (re)commissioned accelerators

Organization

June-October 2003	collect ideas, get feedback from individuals and institutions
November 3-4 2003	draft announcement propose advisory committee propose program committee define organizational deadlines
~September 2004	target date for workshop (4-5 days, ~50-60 attendees)